

REMARKS

Rejected claims 8-10 have been cancelled.

Claims 1-7, 11 have been rejected under 35 U.S.C. §112, ¶2, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

These claims have been variously amended herein to obviate relativistic terms and to define the invention with sufficient particularity and distinctiveness to be patentable to applicants.

Claims 1, 2, 5 and 6 have been rejected under 35 U.S.C. §102(b) as being anticipated by Walinsky et al. '649. This rejection is respectfully traversed with respect to these claims as amended herein.

Specifically, independent claims 1 and 6 as amended now variously recite “a monopole antenna including a substantially hemispherical distal tip operably disposed at a distal end of the ablation device and having a substantially conical shape converging proximally from the distal tip for forming an outer emission surface from which electromagnetic energy is emitted in a uniform electromagnetic field pattern about the monopole antenna in response to electromagnetic energy applied thereto”, and “a monopole antenna attached to the conductor and including a substantially hemispherical distal tip disposed at the distal end of the tubular member, the monopole antenna having a conical shape converging proximally from

the distal tip to form an outer emission surface from which electromagnetic energy is emitted in a substantially uniform electromagnetic field pattern about the monopole antenna in response to electromagnetic energy supplied to the conductor”.

In addition, the dependent claims are further restricted by recitation of various materials and electromagnetic energy levels. Support for these claim recitations is contained in the specification, for example, with respect to the descriptions of Figures 16, 3b, and 4.

These aspects of the claimed invention are not disclosed by Walinsky et al. ‘649 which is understood to rely essentially upon a bared end of a coaxial transmission cable as an antennae for tissue-ablating electromagnetic energy. Such stubby distal end of a coaxial transmission cable offers no hint or suggestion of the specific structure as now claimed by applicant. It is therefore respectfully submitted that amended claims 1, 2, 5 and 6 now pending in this application are not anticipated by, but instead are now patentably distinguishable over Walinsky et al. ‘649.

Claims 3 and 4 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Walinsky et al. ‘649 in view of the teachings of Lenihan et al. ‘382 and Larsen ‘018. This rejection is respectfully traverse with respect to these dependent claims as amended herein.

Specifically, these dependent claims are further limited by recitations of “the antenna is encased in a biocompatible material defining an outer surface” and “biocompatible material is selected from the group consisting of polytetrafluorethylene and polyethylene”.

These features of the claimed invention are further restrictions on the characteristics of the monopole antenna including, for example, the domed and tapered shape thereof as more specifically claimed in the independent claims from which these claims depend.

These aspects of the claimed invention are not shown or suggested by the cited references considered either alone or in the combination proposed by the Examiner.

As the Examiner correctly observed, Walinsky et al. ‘649 fails to disclose encapsulations for the antenna tip, and Lenihan et al. ‘382 disclose a helical antenna that forms a closed loop from helical center conductor distally from the termination of the outer conductor, back to the outer conductor.

There is no disclosure here of a substantially hemispherical distal tip and conical emitting surfaces in the manner as claimed by applicant. And, Larsen ‘018 is understood to disclose a leaky-wave antenna in which the outer (or ground) conductor includes various apertures along the length of the distal antenna portion, with only a blunt distal end configuration, that is operable to heat periurethral tissue

at remote surgical sites. Thus, merely combining these references in the manner proposed by the Examiner at best yields various types of antennae but with no hint or suggestion of a configuration as now claimed by applicant.

It is therefore respectfully submitted that the amended dependent claims are now patentably distinguishable over the cited art.

Claims 7 and 11 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Walinsky et al. '649 in view of Moss et al. '803. This rejection is respectfully traversed with respect to these dependent claim as amended herein.

These dependent claims as now amended are specifically restricted over the independent claim by the additional recitations of "at least one electrode disposed near the distal end of the tubular member proximal to the antenna for sensing electro-physiological signals" and "the at least one electrode is a ring electrode".

These features of the claimed invention provide convenient contacts with tissue at remote locations in the heart for sensing electro-physiological signals on a probe that also includes the type of monopolar antenna as now claimed.

These features of the claimed invention are not disclosed by the cited references considered either alone or in the combination proposed by the Examiner. Specifically, the disclosure of Walinsky et al. '649 is deficient for reasons as discussed in the above Remarks. And, Moss et al. '803 is understood to rely upon a helical antenna coil rather than a monopole antenna of the character as now claimed

by applicant. Thus, merely combining these references in the manner as proposed by the Examiner fails to yield or even suggest the ablation structure as now claimed by applicant. It is therefore respectfully submitted that dependent claims 7, 11 are also patentably distinguishable over the cited art.

Reconsideration and allowance of all pending claims as amended herein are respectfully requested.

A form for Substitute Power of Attorney is enclosed. ✓

The fees for extensions of time and for RCE are enclosed.

Respectfully submitted,
DANY BERUBE

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